Indexes to Volume 30

939

Author Index

Adem, L. See Silsbury, J. H. 53
Allden, W. G.—
Undernutrition of the Merino sheep and its sequelae. V. Influence of severe growth restriction during early post-natal life on reproduction and growth in later

Allen, J. G. See Croker, K. P. 551, 929 Alston, A. M.—

Effects of soil water content and foliar fertilization with nitrogen and phosphorus in late season on the yield and composition of wheat 577

Anderson, J. W. See Paynter, D. I. 703

Antcliff, A. J., Woodham, R. C., and Cellier, K. M.—

Comparison of 182 Sultana vines selected for yield 1111

Anthony, R. C. See McManus, W. R. 635

Atkins, K. D., and Thompson, J. M.— Carcass characteristics of heavyweight crossbred lambs. I. Growth and carcass measurements 1197

Atkins, K. D. See also Thompson, J. M. 1207, 1215

Baghurst, P. See Silsbury, J. H. 53 Balaam, L. N. See Gordon, I. L. 1 Seif, E. 1021

Balnave, D., Farrell, D. J., Cumming, R. B., and Wolfenden, J.—

Hepatic enzyme specific activities and fasting metabolic rate in pullets fed on controlled amounts of food during growth and lay 377

Barker, J. S. F. See Toll, G. L. 767

Bartsch, B. D., Graham, E. R. B., and McLean, D. M.—

Protein and fat composition and some manufacturing properties of milk from dairy cows fed on hay and concentrate in various ratios 191

Batterham, E. S .-

Lupinus albus cv. Ultra and Lupinus angustifolius cv. Unicrop as protein concentrates for growing pigs 369

Beale, P. E., and Thurling, N.—
Genotypic variation in resistance to
Kabatiella caulivora in Trifolium
subterraneum subspecies yanninicum
65

Bishop, G. C .-

Infection of cherry trees and production of a toxin that causes foliar silvering by different isolates of *Chondrostereum* purpureum 659

Bourne, A. S. See Sutherst, R. W. 353
Bowles, J. E. See Langlands, J. P. 565
Brady, R. E. See Hancock, T. W. 173
Brennan, P. S., and Byth, D. E.—

Genotype × environmental interactions for wheat yields and selection for widely adapted wheat genotypes 221

Burch, G. J .-

Soil and plant resistances to water absorption by plant root systems 279 Byth, D. E. See Brennan, P. S. 221 Ogle, H. J. 883

Carter, E. D. See Silsbury, J. H. 53 Cellier, K. M. See Antcliff, A. J. 1111 Chapman, R. B. See Wong, S. W. 497 Christie, E. K.—

Ecosystem processes in semiarid grasslands. II. Litter production, decomposition and nutrient dynamics 29

Clarkson, N. M., and Russell, J. S.— Effect of temperature on the development of two annual medics 909

Cocks, P. S., and Phillips, J. R.— Evolution of subterranean clover in South Australia. I. The strains and their distribution 1035

Colbran, R. C .-

Problems in tree replacement. III. Effects of cultural practices and soil fumigation on root-lesion nematodes and on the growth of apple replants 113

Coleman, B. D. See Williams, A. J. 677
Collis-George, N., and Lloyd, Jocelyn E.—
Basis for a procedure to specify soil
physical properties of a seed bed for
wheat 831

Cook, I. M. See Sutherst, R. W. 353 Corrigenda 219, 1236

Crespo, Maria C. See Smith, R. C. G. 597Croker, K. P., Allen, J. G., Masters, H. G.,and Petterson, D. S.—

Effect of residual grain on the utilization of sweet lupin stubbles and concurrent changes associated with lupinosis, in particular changes in liver copper and zinc, in weaner sheep 929

Croker, K. P., Allen, J. G., Petterson, D. S., Masters, H. G., and Frayne, R. F.— Utilization of lupin stubbles by Merino sheep: studies of animal performance, rates and time of stocking, lupinosis, liver copper and zinc, and circulating plasma enzymes 551

Cumming, R. B. See Balnave, D. 377 Cunningham, R. B. See Thomson, N. J. 105

Date, R. A., and Norris, D. O.— Rhizobium screening of Stylosanthes species for effectiveness in nitrogen fixation 85

David, D. J. See Oram, R. N. 467 Davis, K. C. See Penrose, L. J. 307 Denney, G. D., Hogan, J. P., and

Lindsay, J. R.— Digestion of barrel medic (Medicago truncatula hay and seed pods by

sheep 1177
Derera, N. F. See Gordon, I. L.
Doepel, R. F., McLean, G. D., and

Goss, Olga M.—
Canning peach decline in Western
Australia. I. Association between trunk
cankers, trunk pruning wounds and
crotch angles of scaffold limbs 1089

Donald, G. E. See Langlands, J. P. 565 Donnelly, J. B. See Gordon, A. J. 949

Dove, H., and Freer, M.—
Accuracy of tritiated water rate as an
estimate of milk intake in lambs 725

Downes, A. M. See Jackson, N. 163
Doyle, A. D., and Fischer, R. A.—
Dry matter accumulation and water use
relationships in wheat crops 815

Doyle, P. T., and Moir, R. J.— Sulfur and methionine metabolism in sheep. III. Excretion and retention of dietary and supplemented sulfur, and production responses to intraruminal infusions of pt.-methionine 1185

Eppleston, J. See Moore, N. W. 965, 973 Evans, J. C. See Seif, E. 1021

Faichney, G. J., and White, G. A.—
Formaldehyde treatment of concentrate
diets for sheep. III. Absorption of
amino acids from the small
intestine 1163

Farrell, D. J. See Balnave, D. 377 Ferguson, K. A. See Wheeler, J. W. 711 Fischer, R. A., and Sanchez, M.—

Drought resistance in spring wheat cultivars. II. Effects on plant water relations 801 Fischer, R. A., and Wood, J. T.—
Drought resistance in spring wheat
cultivars. III. Yield associations with
morpho-physiological traits 1001

Fischer, R. A. See also Doyle, A. D. 815 Ford, C. W., Morrison, I. M., and Wilson, J. R.—

Temperature effects on lignin, hemicellulose and cellulose in tropical and temperate grasses 621

Frayne, R. F. See Croker, K. P. 551 Freer, M. See Dove, H. 725

Gigir, S. A. See Wilaipon, B. 293
Gilmour, A. R. See Thompson, J. M.
1207, 1215

Gordon, A. J., and Donnelly, J. B.—

The potential for harvesting weakened wool: a comparison of several sheep breeds in terms of staple strength and depilation force after cyclophosphamide treatment 949

Gordon, I. L .--

Selection against sprouting damage in wheat. III. Dormancy, germinative alpha-amylase, grain redness and flavanols 387

Gordon, I. L., Balaam, L. N., and Derera, N. F.—

Selection against sprouting damage in wheat. II. Harvest ripeness, grain maturity and germinability 1

Goss, Olga M. See Doepel, R. F. 1089 Gowanlock, D. H. See Greber, R. S. 1101 Goward, Elvie A. See Rees, R. G. 421 Graham, E. R. B. See Bartsch, B. D. 191

Graham, J., and Lloyd, A. B.— Survival of potato strain (race 3) of Pseudomonas solanacearum in the deeper soil layers 489

Graham, N. McC., and Searle, T. W.—
Studies of weaned lambs before, during
and after a period of weight loss.

I. Energy and nitrogen utilization 513

Graham, N. McC. See also Searle, T. W. 525

Graham, R. D., and Pearce, D. T.— Sensitivity of hexaploid and octoploid triticales and their parent species to copper deficiency 791

Greber, R. S .--

Cereal chlorotic mottle virus—a rhabdovirus of Gramineae in Australia transmitted by Nesoclutha pallida (Evans) 433

Digitaria striate virus—a rhabdovirus of grasses transmitted by Sogatella kolophon (Kirk.) 43

Greber, R. S., and Gowanlock, D. H.— Rickettsia-like and mycoplasma-like organisms associated with two yellows-type diseases of strawberries in Queensland 1101

Green, A. G. See Oram, R. N. 467 Grout, L. L. See McManus, W. R. 635

Halloran, G. M., and Lee, J. W.— Plant nitrogen distribution in wheat cultivars 779

Halloran, G. M. See also Ridland, P. M. 1027

Hancock, T. W., Mayo, O., and Brady, R. E.—

Response to partial selection on clean fleece weight in South Australian strong-wool Merino sheep. IV. Genetic parameters 173

Hill, Jillian, Robson, A. D., and Loneragan, J. F.—

Effects of copper and nitrogen supply on the distribution of copper in dissected wheat grains 233

Hinks, N. T. See Wheeler, J. W. 711

Hodgson, A. S .-

Rapeseed adaptation in northern New South Wales. III. Yield, yield components and grain quality of Brassica campestris and Brassica napus in relation to planting date 19

Hogan, J. P. See Denney, G. D. 1177

Hood, R. L., and Thornton, R. F.—
Cellularity of ovine adipose tissue 153

Hood, R. L. See also Thornton, R. F. 13.

Humphreys, L. R. See Wilaipon, B. 293

Jackson, N., and Downes, A. M.—
Fibre diameter profile of wool staples in individual sheep 163

Johnson, E. R .-

Use of non-carcass parts in the prediction of beef carcass composition on the slaughter floor 751

Jones, P. N. See Thornton, R. F. 135

Kochman, J. K .-

Effect of temperature on development of soybean rust (*Phakopsora pachyrhizi*) 273

Koffmann, W. See Penrose, L. J. 307 Kriedemann, P. E. See Walker, R. R. 477

Lang, R. D. See Reynolds, K. C. 1079

Langlands, J. P., Bowles, J. E., and Donald, G. E.—

Nutrition of ruminants grazing native and improved pastures. IV. Long-term effects of the quantity of superphosphate applied on the nutritive value of the diet selected by sheep grazing a pasture originally sown to Phalaris aquatica and Trifolium repens 565

Lanigan, G. W. See Stynes, B. A. 201

Lawn, R. J .-

Agronomic studies on Vigna spp. in south-eastern Queensland. I. Phenological response of cultivars to sowing date 855

 II. Vegetative and reproductive response of cultivars to sowing date 871
 Lazdovskis, J. See Simpson, J. R. 609

Leach, G. J.-

Regrowth characteristics of lucerne under different systems of grazing management 445

Lee, J. W. See Halloran, G. M. 779 Leigh, J. H., Wilson, A. D., and Mulham, W. E.—

Study of sheep grazing a belah (Casuarina cristata)-rosewood (Heterodendrum oleifolium) shrub woodland in western New South Wales 1223

Lindsay, D. R. See Sawyer, G. J. 1151 Lindsay, J. R. See Denney, G. D. 1177 Lloyd, A. B. See Graham, J. 489 Lloyd, Jocelyn E. See Collis-George, N. 831

Lloyd, Julie. See Stynes, B. A. 201 Loneragan, J. F. See Hill, Jillian 233

McDonald, J. W. See Paynter, D. I. 703 McDonald, M. W.—

Lysine and methionine supplements in diets for laying pullets 983

McLean, D. M. See Bartsch, B. D. 191 McLean, G. D. See Doepel, R. F. 1089 McLean, R. J.—

Histological studies of resistance to soybean rust, *Phakopsora pachyrhizi* Syd. 77

McLean, R. J. See also Ogle, H. J. 883 McManus, W. R., Anthony, R. C., Grout, L. L., Malin, A. S., and Robinson, V. N. E.—

Biocrystallization of mineral material on forage plant cell walls 635

Maggs, D. H. See Walker, R. R. 477
Malin, A. S. See McManus, W. R. 635
Margan, D. E. See Weston, R. H. 543
Martin, G. B. See Sawyer, G. J. 1151

Masters, H. G. See Croker, K. P. 551, 929 Mayer, R. J. See Rees, R. G. 403 Mayo, O. See Hancock, T. W. 173

Michalk, D. L. See Witschi, P. A. 74 Moir, R. J. See Doyle, P. T. 1185

Moir, R. J. See Doyle, P. T. 1183 Moore, N. W., and Eppleston, J.—

Control of oestrus, ovulation and fertility in relation to artificial insemination in the Angora goat 965

Embryo transfer in the Angora goat 973 Moran, J. B., Norton, B. W., and

Nolan, J. V .-

Intake, digestibility and utilization of a low-quality roughage by Brahman cross, buffalo, banteng, and Shorthorn steers 333

Moran, J. B. See also Norton, B. W. 341 Morrison, I. M. See Ford, C. W. 621 Mott, J. J.—

High temperature contact treatment of hard seed in *Stylosanthes* 847

Mulham, W. E. See Leigh, J. H. 1223

Nair, N. G .-

Studies on the behaviour of mushroom spores in relation to the epidemiology of virus disease 1123

Nolan, J. V. See Moran, J. B. 333 Norton, B. W. 341

Norris, D. O. See Date, R. A. 8: Norton, B. W., Moran, J. B., and Nolan, J. V.—

Nitrogen metabolism in Brahman cross, buffalo, banteng and Shorthorn steers fed on low-quality roughage 341

Norton, B. W. See also Moran, J. B. 333

O'Brien, L.—
Genetic variability of root growth in wheat
(Triticum aestivum L.) 587

Ogle, H. J., Byth, D. E., and McLean, R.— Effect of rust (*Phakopsora pachyrhizi*) on soybea... yield and quality in south-eastern Queensland 883

Oram, R. N., David, D. J., Green, A. G., and Read, B. J.—

Selection in Lupinus albus L. for lower seed manganese concentration 467

Palmer, M. J. See Taylor, G. B. 65 Panetta, F. D.—

Effects of vegetation development upon achene production in the woody weed, groundsel bush (*Baccharis halimifolia* L.) 1053

Germination and seed survival in the woody weed, groundsel bush (Baccharis halimifolia L.) 1067 Payne, A. L. See Stynes, B. A. 201 Paynter, D. L.—

Glutathione peroxidase and selenium in sheep. I. Effect of intraruminal selenium pellets on tissue glutathione peroxidase activities 695

Paynter, D. I., Anderson, J. W., and McDonald, J. W.—

Glutathione peroxidase and selenium in sheep. II. Relationship between glutathione peroxidase and seleniumresponsive unthriftiness in Merino lambs 703

Pearce, D. T. See Graham, R. D. 791 Pelaez, R., and Walker, D. M.—

Milk replacers for preruminant lambs: limiting amino acids in two soybean protein isolates determined with a change-over design 125

Penrose, L. J., Davis, K. C., and Koffmann, W.—

Distribution of benomyl-tolerant Sclerotinia fructicola (Wint.) Rehm. in stone fruit orchards in New South Wales and comparative studies with susceptible isolates 307

Petterson, D. S. See Croker, K. P. 551, 929 Stynes, B. A. 201

Phillips, D. D., and Walker, D. M.— Sequence of limiting amino acids in groundnut protein isolate for the preruminant lamb 321

Phillips, J. R. See Cocks, P. S. 1035 Pinkerton, A., and Simpson, J. R.—

Use of stable strontium as a chemical tracer for root penetration 239

Pinkerton, A. See also Simpson, J. R. 609 Pither, Ronda A. See Williams, A. J. 677 Poppi, D. P., and Ternouth, J. H.—

Secretion and absorption of phosphorus in the gastrointestinal tract of sheep fed on four diets 503

Re, V. M. See Thornton, R. F. 135 Read, B. J. See Oram, R. N. 467

Rees, R. G., Thompson, J. P., and Goward, Elvie A.—

Slow rusting and tolerance to rusts in wheat. II. Progress and effects of epidemics in *Puccinia recondita tritici* in selected wheat cultivars 421

Rees, R. G., Thompson, J. P., and Mayer, R. J.—

Slow rusting and tolerance to rusts in wheat. I. Progress and effects of epidemics of *Puccinis graminis tritici* in selected wheat cultivars 403

Reynolds, K. C., and Lang, R. D.— Mulches, microclimate, topsoil and the establishment of vegetative cover on a dispersible soil 1079

Ridland, P. M., and Halloran, G. M.— Influence of the lucerne bud mite (Erlophyes medicaginis Keifer) on the growth of annual and perennial Medicago species 1027

Robinson, V. N. E. See McManus, W. R. 635

Robson, A. D. See Hill, Jillian 233 Russell, J. S. See Clarkson, N. M. 909

Sale, P. J. M .-

Growth of potatoes (Solanum tuberosum

L.) to the small tuber stage as related to soil temperature

667

Sanchez, M. See Fischer, R. A. 801 Sawyer, G. J.—

Influence of radiant heat load on reproduction in the Merino ewe. I. Effect of timing and duration of heating 1133

 Relative effects of heating before and after insemination 1143

Sawyer, G. J., Lindsay, D. R., and Martin, G. B.—

Influence of radiant heat load on reproduction in the Merino ewe. III. Duration of oestrus, cyclical oestrous activity, plasma progesterone, LH levels and fertility of ewes exposed to high temperatures before mating 1151

Scott, K. J., and Wills, R. B. H.—
Effects of vacuum and pressure infiltration
of calcium chloride and storage
temperature on the incidence of bitter pit
and low temperature breakdown of
apples 917

Searle, T. W., Graham, N. McC., and Smith, E.—

Studies of weaned lambs before, during and after a period of weight loss. II. Body composition 525

Searle, T. W. See also Graham, N. McC. 513

Seif, E., Evans, J. C., and Balaam, L. N.— Multivariate procedure for classifying environments according to their interaction with genotypes 1021

Sheldon, B. L. See Yoo, B. H. 991 Silsbury, J. H., Adem, L., Baghurst, P., and

Carter, E. D.—

Quantitative examination of the growth of swards of *Medicago truncatula* cv.

Jemalong 53

Simpson, J. R., Pinkerton A., and Lazdovskis, J.—

Interacting effects of subsoil acidity and water on the root behaviour and shoot growth of some genotypes of lucerne (Medicago sativa L.) 609

Simpson, J. R. See also Pinkerton, A. 239

Smith, E. See Searle, T. W. 525

Smith, R. C. G., and Crespo, Maria C.— Effect of competition by white clover on the seed production characteristics of subterranean clover 597

Stynes, B. A., Petterson, D. S., Lloyd, Julie, Payne, A. L., and Lanigan, G. W.— Production of toxin in annual ryegrass, Lolium rigidum, infected with a nematode, Anguina sp., and Corynebacterium rathayi 201

Sutherland, I. D. See Sutherst, R. W. 353
Sutherst, R. W., Wharton, R. H., Cook, I. M.,
Sutherland, I. D., and Bourne, A. S.—
Long-term population studies on the
cattle tick (Boophilus microplus) on
untreated cattle selected for different

Taylor, G. B.— Inhibitory effect of light on seed and burr development in several species of Trifolium 895

levels of tick resistance

Taylor, G. B., and Palmer, M. J.—
Effect of some environmental conditions on seed development and hard-seededness in subterranean clover (*Trifolium subterraneum* L.) 65

Ternouth, J. H. See Poppi, D. P. 503 Thompson, J. M., Atkins, K. D., and Gilmour, A. R.—

Carcass characteristics of heavyweight crossbred lambs. II. Carcass composition and partitioning of fat 1207

III. Distribution of subcutaneous fat, intermuscular fat, muscle and bone in the carcass 1215

Thompson, J. M. See also Atkins, K. D. 1197

Thompson, J. P. See Rees, R. G. 403, 42: Thomson, N. J., and Cunningham, R. B.— Genotype×environment interactions and evaluation of cotton cultivars 105

Thornton, R. F., Hood, R. L., Jones, P. N., and Re, V. M.— Compensatory growth in sheep 135

Thornton, R. F. See also Hood, R. L. 153

Thurling, N., and Vijendra Das, L. D.—
Genetic control of the pre-anthesis
development of spring rape (*Brassica*napus L.). I. Diallel analysis of
variation in the field 251

II. Identification of individual genes controlling developmental pattern 261

Thurling, N. See also Beale, P. E. 651 Toll, G. L., and Barker, J. S. F.—

Genetic history of the pedigree Poll Hereford breed in Australia: effect of the importation ban 767

Vijendra Das, L. D. See Thurling, N. 251, 261

Wagland, B. M .-

Host resistance to cattle tick (Boophilus microplus) in Brahman (Bos Indicus) cattle. IV. Ages of ticks rejected 21:

Walker, D. M. See Pelaez, R. 125 Phillips, D. D. 321

Walker, R. R., Kriedemann, P. E., and Maggs, D. H.—

Growth, leaf physiology and fruit development in salt-stressed guavas 477

Weston, R. H .-

Factors limiting the intake of feed by sheep. IX. Further studies of the roughage requirement of the ruminant lamb fed on concentrate diets based on wheat 533

Weston, R. H., and Margan, D. E.— Herbage digestion in the stomach and intestines of weaner lambs at different stages of their maturity 543 Wharton, R. H. See Sutherst, R. W. 353 Wheeler, J. W., Ferguson, K. A., and Hinks, N. T.—

Effect of nutrition, genotype, lactation and wool cover on response by grazing sheep to methionine esters and polymerencapsulated methionine 711

White, G. A. See Faichney, G. J. 1163 Wilaipon, B., Gigir, S. A., and

Humphreys, L. R.—

Apex, lamina and shoot removal effects on seed production and growth of

Stylosanthes hamata cv. Verano 293

Williams, A. J., Coleman, B. D., and Pither, Ronda A.—

Effect of supplementary cystine and energy on the utilization and distribution of cystine in Merino sheep 677

Wills, R. B. H. See Scott, K. J. 917 Wilson, A. D. See Leigh, J. H. 1223

Wilson, J. R. See Ford, C. W. 621 Witschi, P. A., and Michalk, D. L.—

Effect of sheep treading and grazing on pasture and soil characteristics of irrigated annual pastures 741

Wolfenden, J. See Balnave, D. 377 Wong, S. W., and Chapman, R. B.—

Toxicity of synthetic pyrethroid insecticides to predaceous phytoseiid mites and their prey 497

Wood, J. T. See Fischer, R. A. 1001 Woodham, R. C. See Antcliff, A. J. 1111

Yoo, B. H., and Sheldon, B. L.— Sire×hatching season interaction in egg production traits within flocks of domestic fowl 991

Subject Index

Agronomic studies on Vigna spp. I, II 855, 871

Animal Breeding and Genetics

Fibre diameter profile from wool staples, genetic differences 163

Genetic history of pedigree Poll Hereford breed in Australia 767

Genetic parameters in South Australian strong-wool Merino sheep 173 Sire×hatching season interaction in egg

production traits in poultry flocks 991

Animal Metabolism

Amino acid absorption from small intestine of sheep on formaldehydetreated concentrate diets 1163

Cystine metabolism in Merino sheep, effect of cystine and energy supplements 677

Digestion of barrel medic hay and seed pods by sheep 1177

Glutathione peroxidase activities in sheep, effects of selenium pellets 695

Glutathione peroxidase in lambs, and selenium-responsive unthriftiness 703

Animal Metabolism (Continued)

Hepatic enzyme specific activities and fasting metabolic rate in pullets on restricted diets 377

Herbage digestion in stomach and intestines of lambs 543

Limiting amino acids in groundnut protein isolate for lambs 321

Limiting amino acids in low protein milk replacers for lambs 125

Lysine and methionine supplements in diets for laying pullets 983

Milk composition in dairy cows fed on hay/concentrate mixtures 191

Phosphorus metabolism in gastrointestinal tract of sheep 503

Sulfur excretion by sheep, and responses to intraruminal methionine infusions 118: Urea metabolism in tropical bovids 341

Wool growth responses of sheep to methionine compounds, factors in 711

Animal Nutrition and Growth

Body composition of lambs during underfeeding and recovery 525

Body composition of starved and realimented sheep, and compensatory growth 135

Carcass composition and fat partitioning in crossbred lambs 1207

Cellular growth of adipose tissue in sheep 153

Energy and nitrogen utilization by lambs during underfeeding and recovery 513

Fat, muscle and bone distribution in carcass of crossbred lambs 1215

Feed utilization by tropical bovids 333 Growth and carcass characteristics of crossbred lambs 1197

Influence of severe growth restriction in young lambs on later reproduction and growth 939

Lupins as protein concentrates for growing pigs 369

Milk intake by lambs, estimation by tritiated water turnover 725

Prediction of beef carcass composition from non-carcass parts 751

Roughage requirement of lambs on wheat diets 533

Staple strength and depilation force of wool after cyclophosphamide treatment of sheep 949

Utilization of lupin stubbles by sheep, effect of residual grain 929

Animal Pathology and Pests

Cattle tick populations on untreated cattle of differing resistance 353

Lupinosis of sheep, liver copper and zinc and plasma enzymes in, and effects of stocking rate 551, 929

Resistance of Brahman cattle to cattle tick 211

Toxicity of ryegrass infected with a nematode and Corynebacterium sp.

Animal Physiology

Control of oestrus, ovulation and fertility for artificial insemination of Angora goats 965

Embryo transfer in Angora goats 973

Physiological effects and fertility in Merino ewes exposed to high temperatures before mating 1151

Reproduction in Merino ewes subjected to radiant heat load, factors affecting 1133, 1143

Apple:

Calcium chloride treatment and storage temperature effects on bitter pit and low temperature breakdown 917

Effect of cultural practices and soil fumigation on nematodes and replant growth 113

Baccharis halimifolia:

Effects of vegetation development on achene production 1053
Germination and seed survival 1067

Bacterial wilt. See Pseudomonas solanacearum.

Biometrics

Multivariate procedure for classifying environments by interaction with genotypes 1021

Boophilus microplus, populations on untreated cattle of differing resistance 353

Brassica:

campestris and napus, yield, yield components and grain quality in relation to planting date 19 napus, genetic control of pre-anthesis development 251, 261

Brown rot. See Sclerotinia fructicola.

Canning peach decline in Western Australia.

Carcass characteristics of crossbred lambs. I, II, III 1197, 1207, 1215

Cattle:

Digestibility and utilization of low-quality roughage by tropical bovids 333

Genetic history of Poll Hereford breed in Australia 767

Nitrogen metabolism in tropical bovids 341

Prediction of carcass composition on slaughter floor 751

Resistance of Brahmans to cattle tick 21 Cattle tick. See Boophilus microplus.

Cattle tick. See Boophilus micropius.

Cereal chlorotic mottle virus, occurrence, host range, vector, and electron microscopy 433

Cherry, infection and foliar silvering by
Chondrostereum purpureum isolates 659

Chondrostereum purpureum, infection and foliar silvering of cherry trees 659

Cotton, cultivars, genotype × environment interactions and evaluation 105

Cows, dairy, fed on hay/concentrate mixtures, milk composition 191

Digitaria striate virus, occurrence, vectors, host range and electron microscopy 4:

Drought resistance in spring wheat cultivars. II, III 801, 1001

Ecosystem processes in semiarid grasslands.

Evolution of subterranean clover in South Australia. I 1035

Ewes:

Physiological effects and fertility in Merinos exposed to high temperatures before mating 1151

Reproduction in Merinos subjected to radiant heat load, factors affecting 1133, 1143

Feed intake by sheep. IX 533
Formaldehyde treatment of concentrate diets. III 1163

Genetic control of development of spring rape. I, II 251, 261

Glutathione peroxidase and selenium in sheep. I, II 695, 703

Goat, Angora:

Artificial insemination, control of oestrus, ovulation and fertility 965 Embryo transfer in 973

Grapevine, comparison of 182 Sultana clones for yield 1111

Groundsel bush. See Baccharis halimifolia. Guava, salt-stressed, growth, leaf physiology and fruit development 477

Influence of radiant heat load on reproduction in ewes. I, II, III 1133, 1143, 1151

Lambs:

Body composition during underfeeding and recovery 525

Carcass composition and fat partitioning 1207

Early post-natal growth restriction effects on subsequent reproduction and growth 939

Energy and nitrogen utilization during underfeeding and recovery 513

Fat, muscle and bone distribution in carcass 1215

Glutathione peroxidase in, and selenium-responsive unthriftiness 703

Growth and carcass characteristics 1197 Herbage digestion in stomach and

intestines with increasing maturity 543 Limiting amino acids in groundnut protein

isolate for 321 Limiting amino acids in low protein milk

replacers for 125

Milk intake, estimation by tritiated water turnover 725

Roughage requirements on wheat diets 533

Leaf rust of wheat. See Puccinia recondita. Lolium rigidum, toxin from, when infected with a nematode and Corynebacterium

rathayi 201 Lucerne. See Medicago sativa.

Lupinus albus, selection for lower seed manganese 467

Medicago:

Growth of annual and perennial spp., influence of lucerne bud mite 1027

Regrowth under different grazing management systems 445

Root behaviour and shoot growth, effects of subsoil acidity and water 609

scutellata, effect of temperature on development 909

truncatula:

Effect of temperature on development 909

Growth of swards, quantitative analysis 53

Mushroom, behaviour of spores in relation to virus disease 1123

Nutrition of ruminants grazing pastures. IV 565

Pasture Plants

- Biocrystallization of minerals on forage plant cell walls 635
- Nutrient dynamics and litter production of C₃ native and sown C₄ buffel grasslands 29
- Sheep treading and grazing effects on irrigated clover/ryegrass 741
- Soil and plant resistances to water absorption by roots of white clover and tall fescue 279
- Superphosphate effects on nutritive value of Phalaris-clover pasture 565
- Temperature effects on cell wall components in tropical and temperate grasses 621
- Peach, association between trunk cankers, pruning wounds and angles of scaffold limbs in tree decline 1089

Phakopsora pachyrhizi:

- Effect on soybean yield and quality in SE. Queensland 883
- Histological studies of soybean resistance 77
- Rust development in soybeans, temperature effects 273
- Pigs, growing, Lupinus albus and angustifolius as protein concentrates for 369

Plant-Animal Complex

- Sheep grazing a belah-rosewood shrub woodland 1223
- Sheep treading and grazing effects on irrigated annual pastures 741
- Superphosphate effects on nutritive value of diet selected by sheep on
 Phalaris-clover pasture 565

Plant Breeding and Genetics

- Classification of environments by interaction with genotypes 1021
- Comparison of 182 Sultana clones selected for yield 1111
- Genotype × environment interactions and evaluation of cotton cultivars 105
- Genotype × environment interactions for wheat yield and wide adaptation 221
- Pre-anthesis development of spring rape, genetic control 251, 261
- Selection for lower seed manganese in lupins 467
- Variability of root growth in wheat genotypes 587
- Variation in resistance to clover scorch of subterranean clover genotypes 651

Plant Chemistry

- Biocrystallization of minerals on forage plant cell walls 635
- Copper distribution in wheat grains, copper and nitrogen supply effects 233
- Lignin, hemicellulose and cellulose in tropical and temperate grasses, temperature effects 621
- Nitrogen uptake and distribution in wheat cultivars 779
- Sensitivity of hexaploid and octoploid triticales and parent spp. to copper deficiency 791
- Soil water and foliar fertilization effects on wheat yield and composition 577
- Strontium, as chemical tracer for root penetration in crop plants 239

Plant Pathology and Pests

- Association between cankers, pruning wounds and limb angles in peach decline 1089
- Behaviour of mushroom spores in relation to virus disease 1123
- Bitter pit and low temperature breakdown of apples, effects of calcium chloride treatment and storage temperature 91
- Cereal chlorotic mottle virus, a rhabdovirus of grasses and cereals 433
- Digitaria striate virus, a rhabdovirus of grasses 43
- Infection and foliar silvering of cherry trees by Chondrostereum purpureum 659
- Lucerne bud mite, effect on growth of Medicago spp. 1027
- Organisms associated with yellows-type diseases of strawberries 1101
- Resistance to clover scorch of subterranean clover genotypes 651
- Rust effects on soybean yield and quality 883
- Slow rusting and tolerance to rusts in wheat 403, 421
- Soil fumigation effects on nematodes and apple replant growth 113
- Soybean response to infection by Phakopsora pachyrhizi 77
- Survival of *Pseudomonas solanacearum* in deeper soil 489
- Temperature in development of soybean rust 273
- Toxicity of synthetic pyrethroid insecticides to predator mites 497

Plant Physiology and Ecology: Crop Management

Cultivar and drought effects on plant water relations of wheats and other cereals 801, 1001

Defoliation effects on seed production and growth of Stylosanthes 293

Dormancy, α-amylase, grain redness and flavanol changes in wheat grain 387

Dry matter accumulation and water use relations in wheat crops 815

Germination and seed survival in groundsel bush 1057

Grain yield and quality of rapeseed in relation to planting date 19

Growth, leaf physiology and fruit development in salt-stressed guavas 477

Growth of Medicago truncatula swards, quantitative analysis 53

Growth of potatoes to small tuber stage, temperature effects 667

Harvest ripeness, grain maturity and germinability in wheat 1

High temperature contact treatment of hard seed in Stylosanthes 847

Light inhibiting seed and burr development in *Trifolium* spp. 895 Nutrient dynamics and litter production of

Nutrient dynamics and litter production of C₃ and C₄ grasslands 29

Regrowth of lucerne under different grazing management systems 445 Responses of *Viana* cultivars to sowing

date in SE. Queensland 855, 871 Root behaviour and shoot growth of

lucerne, lime and moisture responses 609 Seed development and hard-seededness in

subterranean clover 65
Seed production of subterranean clover,

competition by white clover 597
Subterranean clover strains in South

Australia, distribution 1035

Temperature effects on development in
Medicago spp. 909

Vegetation development effects on achene production in groundsel bush 1053

Plant-Soil Complex

Mulches, microclimate, topsoil and establishment of vegetative cover 1079 Rhizobium strain specificity and nitrogenfixing effectiveness of Stylosanthes strains 85

Soil and plant resistances to water absorption by roots 279

Plant-Soil Complex (Continued)

deeper soil layers

Soil physical properties for wheat seed beds, characterization 831 Survival of *Pseudomonas solanacearum* in

489

Potato, growth to small tuber stage, temperature effects 667

Poultry:

Egg production traits within flocks, sire×hatching season interaction 991 Hepatic enzyme specific activities and fasting metabolic rate in pullets on restricted diets 377

Lysine and methionine supplements in diets for laying pullets 983

Problems in tree replacement. III 11
Pseudomonas solanacearum, survival in deeper soil layers 489

Puccinia:

graminis, epidemics in wheat cvv. 403 recondita, epidemics in wheat cvv. 42

Rapeseed adaptation in northern New South Wales. III 19 Rapeseed. See also Brassica. Response to selection in Merino sheep. IV 173 Rye (triticales). See Wheat.

Sclerotinia fructicola, benomyl-tolerant, in stone fruit orchards in New South Wales 307

Selection against sprouting damage in wheat. II, III 1, 387

Ryegrass. See Lolium rigidum.

Sheep

Amino acid absorption from small intestine of animals on formaldehyde-treated concentrate diets 1163

Body composition of starved and realimented animals, and compensatory growth 135

Cellular growth of adipose tissue 153 Cystine metabolism in Merinos, effect of cystine and energy supplements 677

Digestion of barrel medic hay and seed pods 1177

Genetic parameters in strong-wool South Australian Merinos 173

Glutathione peroxidase activities in, effects of selenium pellets 695

Grazing a belah-rosewood shrub woodland 1223

Performance and occurrence of lupinosis when fed on sweet lupin stubbles 551, 929

Sheep (Continued)

Phosphorus metabolism in gastrointestinal tract, effect of phosphorus supplements 503

Sulfur excretion, and responses to intraruminal methionine infusions 1185

Wool growth responses to methionine, factors in 711

See also Lambs, Wool, Ewes.

Slow rusting and tolerance to rusts in

Slow rusting and tolerance to rusts in wheat. I, II 403, 421
Soybean rust. See Phakopsora pachyrhizi.

Strontium, as chemical tracer for root penetration in crop plants 239

Stem rust of wheat. See Puccinia graminis.

Strawberry, yellows-type diseases, organisms associated with 1101

Stylosanthes:

Defoliation effects on seed production and growth 293

High temperature contact treatment of hard seed 847

Rhizobium strain specificity and nitrogenfixing effectiveness of strains 85

Subterranean clover. See Trifolium subterraneum.

Sulfur and methionine metabolism in sheep. III 1185

Tick resistance in Brahman cattle. IV 21:

Trifolium spp., inhibitory effect of light on seed and burr development 895

Trifolium subterraneum:

Evolution and distribution of strains in South Australia 1035

Resistance to clover scorch of subsp. vanninicum genotypes 651

Seed development and hard-seededness, temperature and moisture in 65 Seed production characteristics, effect of

competition by white clover 597
Triticales. See Wheat.

Undernutrition of Merino sheep and its sequelae. V 939

Vigna spp.:

Phenological response of cvv. to sowing date in SE. Queensland 855

Vegetative and reproductive response of cvv. to sowing date in SE. Queensland 871

Weight loss in weaned lambs. I, II 513, 525 Wheat:

Changes in dormancy, germinative α-amylase, grain redness and flavanols during grain development 387

Copper distribution in grain, copper and nitrogen supply effects 233

Cultivar and drought effects on plant water relations in wheats, triticale and barley 801, 1001

Dry matter accumulation and water use relations in dryland crops 815

Genotype × environment interactions for yield and wide adaptation 221

Grain maturity and germinability of wheat in selection against sprouting damage 1

Nitrogen uptake and distribution in cultivars 779

Sensitivity of hexaploid and octoploid triticales and parent spp. to copper deficiency 791

Soil physical properties for seed beds, characterization 831

Variability of root growth in genotypes 587

Yield and composition, effects of soil water and foliar fertilization 577

Wool:

Fibre diameter profile of staples from individual sheep 163

Staple strength and depilation force in several breeds after cyclophosphamide treatment 949



